Revision of the Tribe Chalepini of America North of Mexico IV. Genus *Sumitrosis* Butte (Coleoptera: Chrysomelidae)

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Abstract: These beetles have been previously known in the genus *Anoplitis* Kirby; in this study the name is changed to *Sumitrosis* Butte, because *Anoplitis* is a junior synonym of *Chalepus* Thunberg. This synonymy is necessary because their types are congeneric. All names previously designated therefore represent new combinations. The 55 species from the Junk Catalogue, (Uhmann, 1957 and 1964) are now transferred to this genus. Six species compose the genus *Sumitrosis* in the region under consideration. These are *ancoroides* (Schaeffer), **arnetti** a new species, *inaequalis* (Weber), *lateritia* (Smith), *pallescens* (Baly) a new record in the United States, and *rosea* (Weber). Descriptions of the species are given, together with the complete list of references, and key to the species is presented. Distributional data and maps are included for each, as are illustrations of the male genitalia.

INTRODUCTION

This revision of *Sumitrosis* Butte (1968a), is the fourth[1] in a series of papers reviewing the six genera of Chalepini of America North of Mexico. The genus *Chalepus* Thunberg, 1805, is a senior synonym of *Anoplitis* Kirby, 1837. This synonymy was necessary because their type species were congeneric (Butte, 1968*b*). *Anoplitis* Kirby is monobasic, with *Hispa bicolor* Olivier, 1792, as its type. This species is not congeneric with most of the species that have been listed under *Anoplitis* by Chapuis (1875), Weise (1911a), and Uhmann (1935, 1957 and 1964). Although Chapuis adopted *Anoplitis* from Kirby, he ignored the original genotypic fixation and applied this generic name in a very different sense, selecting as his genotype ". . . les *Hispa rosea* de Weber, de Harris, et la *Hispa suturalis*[2] de Fabricius." *Anoplitis bicolor*, the type species originally fixed for *Anoplitis*, is congeneric with *Chalepus sanguinicollis* (L. 1771), which is the genotype of *Chalepus* Thunberg, as designated by Weise, (1905a: 64). *Anoplitis* as used by Chapuis is followed by Weise (1911a) who lists 38 species and accepted by Uhmann, who in 1935 discusses the South American species of this genus along with some other new genera. Uhmann (1957 and 1964) lists a total of 56 species in *Anoplitis*. Since there are no other names available for the species assigned to *Anoplitis* of authors, *Sumitrosis* was proposed as a substitute name with *Hispa rosea* Weber, 1801, as its genotype (Butte, 1968a: 46).

[1] The third part of this series, the revision of the genus *Odontota* Chevrolat 1837, was published in the Coleopterists' Bulletin, **22**: 4: December, 1968.

[2] *Hispa suturalis* Fabricius, 1801, with *Hispa rosea* Weber, 1801, was listed as a synonym (in error).

The species of this genus closely resemble *Anisostena* Weise in their general appearance and by the presence of eight and one-half rows of punctures on each elytron. However, these two genera are easily separated by the following sets of characters in which those for *Sumitrosis* are given first, those for *Anisostena* second. Body broader, very wide at humerus: body slender, nearly cylindrical. Eyes more or less swollen: eyes feebly swollen, at least not projecting out farther than side of neck. Mesotibiae straight or feebly bent: mesotibiae strongly bent.

The measurements used here were described previously by Butte (1968a).

ACKNOWLEDGMENTS

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I wish also to express appreciation to the authorities and individuals of the following institutions for the loan of specimens for this study. The letters in parentheses indicate the abbreviations used for these institutions throughout this work. American Museum of Natural History, (AMNH), Drs. J. G. Rozen, Lee H. Herman, Jr., and Mr. J. Pallister; California Academy of Science, (CAS), Mr. H. B. Leech and Mr. J. W. Green; Canada National Collection, (CNC), Dr. W. J. Brown; Chicago Natural History Museum, (CNHM), Dr. R. L. Wenzel; Cornell University, (CU), Dr. L. L. Pechuman; Purdue University at Lafayette, (PUL), Dr. Ross H. Arnett, Jr., University of California at Berkeley, (UCB), Dr. Ray F. Smith; University of North Carolina, (UNC), Dr. D. A. Young, Jr.: United States National Museum, (USNM), Mr. O. L. Cartwright, Mr. G. Vogt and Dr. R. E. White. The abbreviation (JGB) is used for my personal collection.

Genus *SUMITROSIS*[3,4] Butte, 1968

TYPE SPECIES OF GENUS. *Sumitrosis rosea* (Weber, 1801: 66) designated by Butte, (1968a: 46).

DIAGNOSTIC FEATURES OF GENUS. Body not elongate, very wide at humerus; eyes more or less swollen, mesotibiae straight or feebly bent.

DESCRIPTION OF GENUS. Length from 3.2 to 4.5 mm.; width from 1.4 to 2.2 mm.

HEAD slightly wider than length. Vertex finely granulose with a deep median sulcus. Frontal carina feeble and joins clypeal base. Antennae varies in length. Clypeus feebly transverse; surface varies from shining, impunctate to microgranulose. Mandibles robust, apices varies. PRONOTUM transverse; lateral margins obtusely subangulate at middle and feebly narrowing towards apex and obliquely more so towards base, dorsum transversely convex, posterior depression may be present or absent. ELYTRA elongate-ovate; apices con-

[3] This genus is named after my mother, the late Mrs. Sumitra G. Butte.

[4] Sanskrit origin, "good friend."

jointly distinctly rounded: each elytron with eight, at the extreme base with nine rows of punctures; each elytron tricostate; outer margin may be serrulate or absent.

MALE GENITALIA. Aedeagus moderately sclerotized and showing considerable curvature from below. Basal foramen fairly large with postero-ventral border prominent and subtriangular; antero-dorsal wall of foramen from rectate to feebly convex; its shape and width varies. Median lobe tapering distally to acute or subacute point. Apical orifice fairly large and U-shaped. Apical hood large and varies in shape; lateral plates large and regular. Parameses elongate, lateral sides gradually narrowing to acute apex. Strut keeled, and varies in length and shape. Flagellum feeble and irregular. Spiculum generally U-shaped.

SPECIES INCLUDED. The Junk Catalogue (Uhmann, 1957 and 1964) has listed 56 species in *Anoplitis* Kirby. One species, *Odontota gracilis* Horn (1883) should be transferred to *Anisostena* Weise (1910), because its characteristics are similar to that genus. The remaining 55 species are now transferred to *Sumitrosis* Butte (1968a). All names previously designated therefore represent new combination.

DISTRIBUTION. The *Sumitrosis* is represented in America North of Mexico by six species: These are *S. ancoroides* (Schaeffer); *S.* **arnetti** a new species; *S. inaequalis* (Weber); *S. lateritia* (Smith); *S. pallescens* (Baly), a new record in the United States; and *S. rosea* (Weber).

CANADA, UNITED STATES, MEXICO, BRITISH WEST INDIES, GUATEMALA, NICARAGUA, COSTA RICA, PANAMA, COLOMBIA, SURINAM, FRENCH GUIANA, BRAZIL, PERU, BOLIVIA, PARAGUAY, ARGENTINA.

KEY TO THE SPECIES OF *SUMITROSIS* OF NORTH AMERICA

1. Antennae pale yellow; postero-lateral angles of elytra distinctly angulate, third costa strongly explanate at apex ..... *rosea* (Weber)
   Antennae piceous; postero-lateral angles of elytra evenly rounded, third costa not as above 2
2(1). Elytra uniformly rubescent ..... *lateritia* (Smith)
   Elytra variably maculate with piceous or picinus spots 3
3(2). Clypeus moderately convex, and strongly transversely elevated at the base, surface opaque, micro-granulose with distinct carinae along lateral margin and base (Fig. 8) 4
   Clypeus feebly convex, and not transversely elevated at the base, surface shining, impunctate, and without distinct carinae along lateral margin and base (Fig. 9) ..... **arnetti**, n. sp.
4(3). Pronotum entirely pale yellow ..... *pallescens* (Baly)
   Pronotum variably maculate with black vittae, ground color testaceous 5
5(4). Elytra parallel, not wider at apex; sutural strip picinus from scutellum to about middle of the elytra ..... *ancoroides* (Schaeffer)
   Elytra gradually wider behind, somewhat expanded at apex; sutural strip not marked as above ..... *inaequalis* (Weber)

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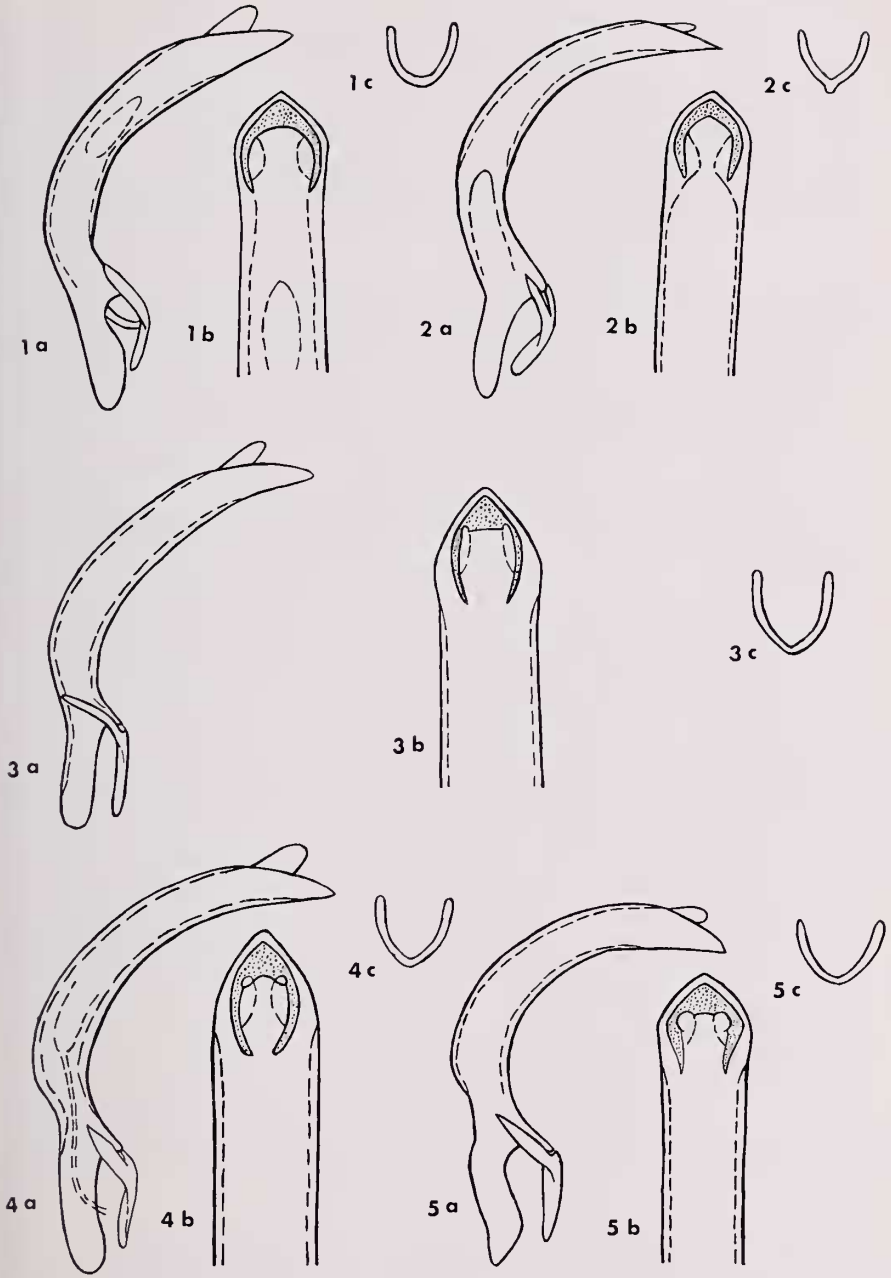
FIGS. 1–5. Drawings of the genitalia of the species of *Sumitrosis*. Similar letters designate corresponding parts in the different species: a, lateral or slightly dorso-lateral view of the



aedeagus and tegmen; b, dorsal or dorsocaudal view of aedeagus; c, dorsal or dorsocaudal view of speculum gastrale. Figs. 1a, b, c, *S. rosea*; Figs. 2a, b, c, *S.* **arnetti**; Figs. 3a, b, c, *S. pallescens*; Figs. 4a, b, c, *S. ancoroides*; Figs. 5a, b, c, *S. inaequalis*.

1. **Sumitrosis rosea** (Weber, 1801), new combination
(Figs. 1, a, b, c; and Fig. 6)

Hispa rosea Weber, 1801:66. (Location of type: Unknown to me).

TYPE LOCALITY. America.

Hispa philemon Newman, 1838:390. (Location of type: probably in the British Museum of Nat. Hist., London; or Hope Museum of Oxford, England.)

TYPE LOCALITY. Pennsylvania.

Odontota philemon (Newman), Crotch, 1873: 81, (Synonymized).

Uroplata philemon (Newman), Gemninger and Harold, 1874: 3612.

Anoplitis rosea (Weber) Chapuis, 1875: 317; Weise, 1911 (a): 23; 1911 (b): 34; Leng, 1920: 303; Schaeffer, 1933: 104; Uhmann, 1935: 232, 234; 1947: 118; Wilcox, 1954: 470; Uhmann, 1957: 80; 1964: 416.

Chalepus roseus (Weber), Baly, 1885: 49, 58.

DIAGNOSTIC FEATURES. This species resembles *S. inaequalis* in habitus, but it may be readily separated from the latter by the presence of following characteristics:

Antennae always pale. Apical angles of elytra distinctly angulate; third costa strongly explanate near apex.

DESCRIPTION OF SPECIES. Arizona, Pima Co., Santa Rita Mountains, October 5, 1936, Bryant, (CAS).

Total length 4.2 mm.; width 1.6 mm.

HEAD length/width ratio, 0.55. Vertex with a median sulcus and a small indistinct indentation on either side near eyes. Antennae 1.3 mm. in length; segments 2–6 robust; 2nd segment about .5 times shorter than 1st and 3rd; 3rd segment length/width ratio, 1.33. Clypeus moderately convex; surface opaque, micro-granulose and transverse carina present near the antennal base. Mandibles distinctly tridentate. Eye width subequal to interocular distance and smaller than clypeus. PRONOTUM length 0.7 mm.; width 0.9 mm.; widest at center; dorsum transversely convex and no traces of posterior depression; surface orbiculo-foveolate, interstices subcristate; medial line absent. ELYTRA oblong, length 2.7 mm.; lateral margins slightly dilated apically, and hinder angle angulate; sides and apex rather coarsely serrulate; third costa strongly explanate, and feebly serrulate at apical angle.

COLOR. Similar in color pattern to *S. inaequalis* (Weber), except the antennae which are always pale yellow.

MALE GENITALIA. Anterodorsal wall of foramen rectate and running into a feeble depression at one-fourth from base (Fig. 1a). Median lobe tapering distally to acute point (Fig. 1b). Apical hood subacute towards apex. Tegmen U-shaped. Strute enlongate and feebly keeled. Spiculum as shown in fig. 1c.

FEMALE. Indistinguishable from male except by dissection.

BIOLOGY. Wilcox (1954), has reported that host plants are Composits. Following information is taken from the labels: "on Locust"; "on Wild Sweet potato"; "reared from *chenopodium album* L." which is commonly known as Lambs-quarters (Chenopodiaceae).

LARVAE. Unknown.

VARIATION AND DISCUSSION. The size variations are as follows: total length 3.3–4.5 mm.; elytral length 2.5–3.5 mm.; elytral width 1.5–2.2 mm.

There are variations in the length and width of the 3rd antennal segment. The length and width is subequal in the North eastern species, it is wider than its length in the South east species, it is longer than its width in the South west species. The interocular distance is wider in North eastern species than Southeast species.

This species is extremely variable in color. The head from pale yellow to testaceous. Pronotum often pale, usually more or less maculate with piceous. The elytra sometimes pale yellow or testaceous with slight traces of black markings resembling in this respect with *S.* **arnetti** n. sp. and *S. inaequalis* (Weber), or the surface may be black with a few indistinct yellow spots and because of this color variation, *philemon* (Newman) has been synonymized with *rosea* (Weber), by Crotch (1873).

Distribution. The general distribution of *S. rosea* (Weber) is indicated in Fig. 6. This species is known from Canada southward to Florida and westward to Arizona. It has been collected from middle of May to middle of October, but mostly in June and July.

SPECIMENS EXAMINED. 123; *CANADA*: ONTARIO: Trenton, 2. (CNC). MANITOBA: Aweme, N. Criddle, May 24, 1922, 1. (CNC). *UNITED STATES*: NEW YORK: Wyoming Co., Portageville, May 30, 1888, E. P. V. Collector, 1, (CAS). Erie Co., Lancaster, E. P. V. Coll., 1, (CAS). Suffolk Co., Cold Spring Harb., July 30, 1922, H. M. Parshley, 1, (CAS). No further data, 1, (AMNH). NEW JERSEY: Warren Co., Phillipsburg, June 14, 1914, J. W. Green, 14, (CAS). Mercer Co., Trenton, August, 1905, H. B. Weiss, 3, (AMNH); Mercerville, August 24, 1910, 2, (AMNH). Hornerstown, May 14, 1910, 1, (AMNH). PENNSYLVANIA: Northampton Co., Windgap, July 7, 1936, J. W. Green, 1, (CAS). Clearfield Co., Phillipsburg, May 15, 1921, L. S. Slevin Collection, 2, (CAS). Dauphin Co., August 20, 1928, J. N. Knull, 2, (CAS). Hummerstown, June 2, 1920, J. N. Knull, 2, (CAS). MARYLAND: Baltimore Co., Baltimore, June 2, 1909, F. E. Blaisdell, 28, (CAS); Sparrows Pt., July 3, 1932, J. W. Green, 1, (CAS). Plummers, 1–V-1930, F. E. Blaisdell, 6, (CAS). NORTH CAROLINA: Buncombe Co., Black Mts., V-16-, 1, (AMNH). FLORIDA: Lake Co., Eustis, 4-6-1913, W.S.B., 2, (PUL). Enterprise, June 16, Hubbard and Schwarz, 3, (USNM). TENNESSEE: No further data, A. Fenyes collection, 1, (CAS). INDIANA: Gibson Co., Oct. 22, 1935, Montgomery, 13, on Locust, (PUL). Perry Co., May 21, 1908, W. S. B., 1, (PUL). Marion Co., May 17, 1902, W.S.B., 1; August 31, 1920, W.S.B., 2, (PUL). Morgan Co., June 28, 1932, Musgrave, 1, on wild sweet potato, (PUL). Lawrence Co., Bedford, July 26, 1932, G. Edw. Marshall, 1, reared from *Chinopodium allium*, (PUL). KANSAS: Douglas Co., Lawrence, June 1, 1922, C. H. Curran, 1, (CAS), May 20, 1951, J. G. Rozen, 1, (UCB). Ouga, May 19, 1923, Crevecoeur, 2, (CAS). No further data, Ashton collection, 2, (PUL). ARIZONA: Pima Co., Madero Cyn., Santa Rita Mts., October 18, 1936, E. P. Van Duzee, 5, (CAS); October 5, 1936, Bryant, 25, (CAS); Subbard and Schwarz, 2, (USNM). Cochise Co., Cave Crk., Chiricahua Mts., June 20, 1932, J. O. Martin, 8, (CAS); Portal, June 1, 1952, M. Casier, W. Gertach, R. Schrammel, 1, (AMNH); Huachuca Mts., July, 1936, E. S. Ross, 2, (CAS); Miller Cyn., May 12, 1932, J. O. Martin, 1, (CAS); Ramsay Canyon, July 16, 1948, C. and P. Vaurie, 1, (AMNH).

2. **Sumitrosis lateritia**[5,6] (Smith, 1886), new combination
(Fig. 6)

Odontota lateritia Smith, 1886: 95. (Location of type: probably in the U. S. National Museum, Washington, D. C., or in the Rutgers College Collection, New Brunswick, New Jersey).

TYPE LOCALITY. Arizona, U. S. A.

Anoplitis lateritia (Smith), Weise, 1911(a): 22; 1911(b): 33; Uhmann, 1957: 79.

DIAGNOSTIC FEATURES. This species may be easily separated from other species of this genus by the presence of uniform rubescent color of the elytra.

DESCRIPTION OF SPECIES. Arizona. Total length 6 mm.

HEAD vertex with a median sulcus. PRONOTUM slightly wider at base, sides arcuate; dorsum transversely convex with a shallow posterior depression; surface coarsely and densely foveolate; medial line present. ELYTRA parallel sided; lateral margins distinctly serrulate.

COLOR. Antennae black. Dorsum uniformly rubescent. Head ventrally red else black. Prosternum red, else black; fore-legs rufo-piceous; middle-legs piceous; hind-legs black.

MALE GENITALIA. Unknown.

FEMALE. Unknown.

BIOLOGY. Unknown.

LARVAE. Unknown.

DISCUSSION. Smith (1886) has described this species from one specimen from Arizona. Dorsum rubescent color is the characteristic of this species.

DISTRIBUTION. The distribution of *Sumitrosis lateritia* is indicated in fig. 6., and it is known from Arizona.

SPECIMENS EXAMINED. Nil.

3. *Sumitrosis* **arnetti**, new species
(Figs. 2, a, b, c; 6; and 9)

DIAGNOSTIC FEATURES. This species resembles *S. inequalis* in habitus, but it may be readily separated from the latter by the presence of following characteristics:

Clypeus feebly convex, shining, impunctate and without transverse carina near antennal base (Fig. 9); mandibles tridentate.

This species is named in honor of Dr. Ross H. Arnett, Jr., with whom the writer, as a student, spent a never-to-be-forgotten summer collecting insects in the type locality.

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[5] The description of *lateritia* is taken from the literature.

[6] Dr. Sanderson has informed me in a personal communication that "I am in the process of completing a report on the Hispinae of Illinois which includes . . . a new genus for *Odontota lateritia* Smith." I have not seen any material on this species, therefore, for the present I am retaining *lateritia* (Smith) in this genus until the opportunity to study the material is presented.

FIG. 6. Distribution of the species of *Sumitrosis, rosea, lateritia,* **arnetti.**

HOLOTYPE. ARIZONA, Santa Cruz Co., west of Nogales, Bear Canyon, June 23, 1948, Down, Lindsey and Barber collectors; male; to be deposited in the American Museum of Natural History, New York.

DESCRIPTION OF THE HOLOTYPE. Length 4.2 mm.; width 1.7 mm.

HEAD length/width ratio, 0.65; vertex with a deep median sulcus and a small indentation on either side near eyes. Antennae 1.5 mm. in length; segments 2–6 slender and irregularly sulcate and carinate; 1st and 2nd segment subequal in length. 3rd about 1.5 times longer than 2nd, and its length/width ratio, 1.6. Clypeus feebly convex, shining, impunctate, and without transverse carina near antennal base. Mandibles distinctly tridentate. Eye width wider than interocular distance and smaller than clypeus. PRONOTUM length 0.8 mm.; width 1.0 mm.; widest at one-third from base; dorsum transversely convex, feebly depressed with antescutellar transverse ridge; surface orbiculo-foveolate, interstices subcristate; medial line distinctly visible. Elytra parallel sided; length 3.0 mm.; lateral and apical margins serrulate; third costa apically broadly arcuate towards suture and connate to apex of 2nd and 1st costae.

COLOR. Antennae black. Basal and apical margins of pronotum, scutellum, and base of elytra ivory white. Lateral margins of pronotum with a narrow, irregular black vitta; a somewhat 'V' shaped piceous evanescent design at center of the disc. Elytral suture, costae and lateral margins marked with black and white as follows: Elytral suture piceous from the scutellum to about one-third of elytral length, and then small portion of apical end, in between one piceous spot. Three piceous longitudinal marks on 1st costa, alternating white and black marking on 2nd costae are so disposed that the black of the 2nd costa is mostly opposite to white of the 1st costa. A large longitudinal marking on the lateral margin and one at the outer apical angle, involving the 3rd costa. A piceous spot on humeri. Venter piceous. Legs pale yellow except the apical end of last tarsi tinged with black.

MALE GENITALIA. Antero-dorsal wall of foramen feebly convex and running into a depression at one-fifth from base (fig. 2a). Median lobe tapering distally to acute point (fig. 2b). Apical hood subacute towards apex. Tegmen V-shaped. Strut short and strongly keeled. Spiculum U-shaped (fig. 2c).

ALLOTYPE. Same data as holotype. Female. Length 4.2 mm.; width 1.7 mm. Agrees with the holotype in all essential respects except the fifth visible sternum with a small irregular patch of setae on either side of central elevation. To be deposited in the California Academy of Sciences, San Francisco.

PARATYPES. 10: Paratypes are designated from the following localities: ARIZONA, Santa Cruz Co., West of Nogales, Bear Canyon, June 23, 1948, 6, Down, Lindsey and Barber, (type locality), (USNM); near Nogales, Patagonia, June 12, 1949, 1, T. Allen, (USNM); Pena Blanca, September 14, 1947, 3, (AMNH).

BIOLOGY. The following information is taken from the specimen labels. "on *Baccharis* sp."; "on *Zexmenia* sp." These plants belong to the family Compositae.

LARVAE. Unknown

VARIATION AND DISCUSSION. The size variations are as follows: total length 3.8–4.2 mm.; elytral length 2.8–3.0 mm.; elytral width 1.5–1.7 mm.

The close relationship between *S.* **arnetti**, n. sp., and *S. inaequalis* (Weber), is indicated in their similar appearance of color, size and shape. However, these two species are easily separated by the following sets of characters in which those of **arnetti** are given first and those for *inaequalis* second: Clypeus feebly convex and not transversely elevated at the base; clypeus moderately convex

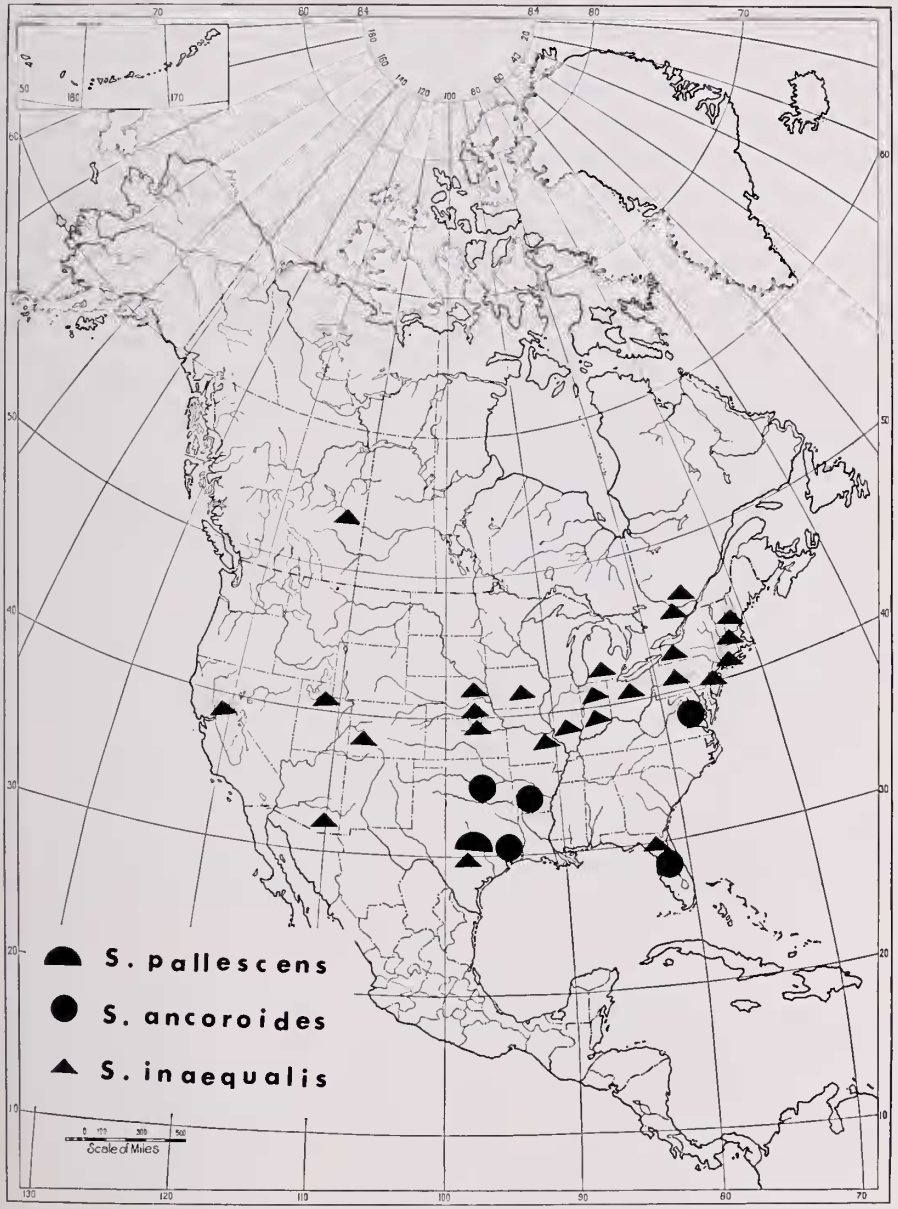


Fig. 7. Distribution of the remaining species of *Sumitrosis, pallescens, ancoroides, inaequalis.*

and strongly transversely elevated at the base. Clypeal surface shining, impunctate and without transverse carina at the base; clypeal surface opaque, micro-granulose with transverse carina at the base. 3rd antennal segment distinctly longer than 2nd; 3rd antennal segment subequal to 2nd. Apical hood of aedeagus subacute towards apex; apical hood of aedeagus truncate towards apex. Strut short; strut elongate.

DISTRIBUTION. The general distribution of *S.* **arnetti**, n. sp. is indicated in fig. 6. This species is known from Arizona, and it has been collected from middle of June to middle of September.

4. **Sumitrosis pallescens** (Baly, 1885), new combination

(Figs. 3, a, b, c; and Fig. 7)

Chalepus pallescens Baly, 1885: 49, 56; Champion, 1894: 236. (Location of type: British Museum of Natural History, London, England)

TYPE LOCALITY. Bugaba, Panama.

Chalepus jansoni Baly, 1885: 49, 55; Champion, 1894: 236 (Synonymized). (Location of type: British Museum of Natural History, London, England).

TYPE LOCALITY. Chontales, Nicaragua.

Anoplitis jansoni (Baly), Weise, 1906: 238; 1911(a): 22; 1911(b): 34. Uhmann, 1930: 31, 162; 1935: 234; 1957: 79.

Anoplitis pallescens (Baly), Weise, 1906: 236; 1911(a): 23; 1911(b): 34; Uhmann, 1930: 246; 1935: 234; 1957: 79.

DIAGNOSTIC FEATURES. This species resembles *S. ancoroides* (Schaeffer) in habitus, but it may be readily separated from the latter by the presence of following characteristics:

Pronotum entirely pale yellow; elytra oblong, sutural strip is not picinus.

DESCRIPTION OF SPECIES. MALE. Texas, Leon Co., July 4, 1948, J. L. Ward, (USNM).

Total length 3.1 mm.; width 1.3 mm.

HEAD length/width ratio, 0.56. Vertex with a median sulcus. Antennae 1.0 mm. in length; segments 2–6 irregularly sulcate and feebly carinate; 1st and 3rd segment subequal in length; 2nd slightly smaller than 1st and 3rd segment. Clypeus distinctly convex; base subangulate and prominent; surface micro-granulose. Mandibles monodentate, apices obtuse. Eye width slightly larger than interocular distance and subequal with clypeus. PRONOTUM length 0.5 mm.; width 0.9 mm.; widest at one-third from base; dorsum transversely convex and no traces of posterior depression; surface coarsely and deeply foveo-punctate, interstices subcristate. Medial line ill-defined. ELYTRA oblong, length 2.3 mm.; slightly arcuately broader apically; lateral and apical margins distinctly and irregularly serrulate.

COLOR. Antennae black. Dorsum uniformly pale yellow, except towards the apex of elytra a few small, ill-defined piceous spots, which form an irregular short fascia.

MALE GENITALIA. Anterodorsal wall of foramen feebly convex and running into a depression

at one-fifth from base (Fig. 3a). Median lobe tapering distally to obtuse point (Fig. 3b). Apical hood truncate towards apex. Tegmen V-shaped. Strut elongate and feebly keeled. Spiculum U-shaped and symmetrical (Fig. 3c).

FEMALE. The 5th abdominal sternum with a large, irregular patch of setae on central elevation, whereas in the male it is hardly perceptible.

BIOLOGY. The following information is taken from the specimen labels. "Reared from *Cassia fasciculata* Michx." This plant is commonly known as Partridge-Pea (Leguminosae).

LARVAE. Unknown.

VARIATION. The size variations are as follows: total length 3.1–3.5 mm.; elytral length 2.3–2.5 mm.; elytral width 1.2–1.5 mm. In some specimens the elytra is uniformly pale yellow, except a small piceous spot at the center of the first costa.

DISTRIBUTION. The general distribution of *S. pallescens* (Baly) is indicated in Fig. 7, and it is a new record for the United States. This species has previously been recorded from Panama, México, Nicaragua, and Costa Rica. Six adults, agreeing with the description of *pallescens* Baly, (1885: 56), have been studied from Leon Co., Texas. They were collected from early June to middle of August.

SPECIMENS EXAMINED. 6: 3 males; 3 females. TEXAS, Leon Co., July 4, 1948, J. L. Ward, 2 males, 1 female, (USNM); August 16, 1948, J. L. Ward, 1 male, 2 females, (USNM).

5. **Sumitrosis ancoroides** (Schaeffer), new combination
(Figs. 4, a, b, c; and Fig. 7)

Anoplitis ancoroides Schaeffer, 1933: 105; Blackwelder, 1939: 64, Uhmann, 1957: 76. (Location of type: U. S. National Museum, Washington, D. C.).
TYPE LOCALITY. Merchantville, New Jersey.

DIAGNOSTIC FEATURES. This species resembles *S. inaequalis* (Weber) in habitus, but it may be readily separated from the latter by the presence of following characteristics:

Elytra parallel, not wider at apex; sutural strip picinus from scutellum to about middle of the elytra.

DESCRIPTION OF SPECIES. FEMALE. Virginia, Fairfax Co., Vienna, July 25, 1942, J. C. Bridwell, (USNM).

Total length 3.3 mm.; width 1.4 mm.; subcuneiform.

HEAD length/width ratio, 0.583. Vertex with a median sulcus. Antennae 1.1 mm. in length; segments 3–6 irregularly sulcate and feebly carinate; 1st and 2nd segment subequal in length; 3rd about 0.5 times longer than 2nd. Clypeus distinctly convex; base subangulate and prominent; surface micro-granulos. Mandibles monodentate, apices obtuse. Eye width subequal to clypeus and interocular distance. PRONOTUM length 0.6 mm.; width 0.9 mm.;

widest at one-third from base; dorsum transversely convex and no traces of posterior depression; surface coarsely and deeply foveo-punctate, interstices cristate. Medial line ill-defined. ELYTRA parallel sided and not wider apically; lateral and apical margins very indistinctly and distantly serrulate.

COLOR. Antennae black. Lateral margins of pronotum with a narrow, irregular black vitta; a short, oblique, obscure black line on each side of the medial line forming a somewhat "V" shaped design. Elytral suture bluish black from the scutellum to about middle and thence dilated at its apex on each side into a short apical branch, reaching to and involving the first costa; slightly above this branch on the second costa is a small spot which is more or less connected with apical branch producing a somewhat anchor-like design. Near apex there are three small black spots which involves the 2nd, 3rd costa and lateral margins; and below these from the first costa to the suture an oblique black line. Venter black or piceous. Legs pale with apical tarsus black near claws.

MALE GENITALIA. Anterodorsal wall of foramen feebly convex and runs into a depression at one-fourth from base (Fig 4a). Median lobe tapering distally to acute point (Fig. 4b). Apical hood as shown in Fig. 4b. Tegmen V-shaped. Strut elongate and feebly keeled. Spiculum U-shaped and symmetrical (Fig. 4c).

FEMALE. Indistinguishable from male except by dissection.

BIOLOGY. The following information is taken from the specimen labels. "Reared on *strophostyles umbellata* (Muhl.) by J. C. Bridwell in June 10–24, 1942." This plant is commonly known as Wild-Beans (Fabaceae).

LARVAE. Unknown.

VARIATION. The size variations are as follows: total length 2.9–3.7 mm.; elytral length 2.2–2.7 mm.; elytral width 1.3–1.5 mm.

In some specimens from Florida, Arkansas, and Texas, the V-shaped black design on the pronotum is absent.

DISTRIBUTION. The general distribution of *S. ancoroides* (Schaeffer) is indicated in fig. 7. This species is known from Virginia southward to Florida and westward to Texas. It has been collected from June to middle of August, but mostly in July.

SPECIMENS EXAMINED. 21: VIRGINIA, Fairfax Co., Vienna, July 10–25, 1942, J. C. Bridwell, 3, reared on *Strophostyles umbellata* (Muhl.), (USNM). FLORIDA, Hillsborough Co., St. Petersburg, August 18–24, 1931, Bradley and Knorr, 1, (CU). ARKANSAS, Hempstead Co., Hope, July 13, 1925, L. Knobel, 1, (CU). OKLAHOMA, Marshall Co., Lake Texoma, 2 mi. east of Willis, June and July 1965, R. M. Bohart, 2, (UNC). TEXAS, Harris Co., Seabrook, August 6, J. W. Green, 5, (CAS); August 9, H. A. Wenzel, 1, (CAS). Harrisburg, July 31, J. W. Green, 8, (CAS).

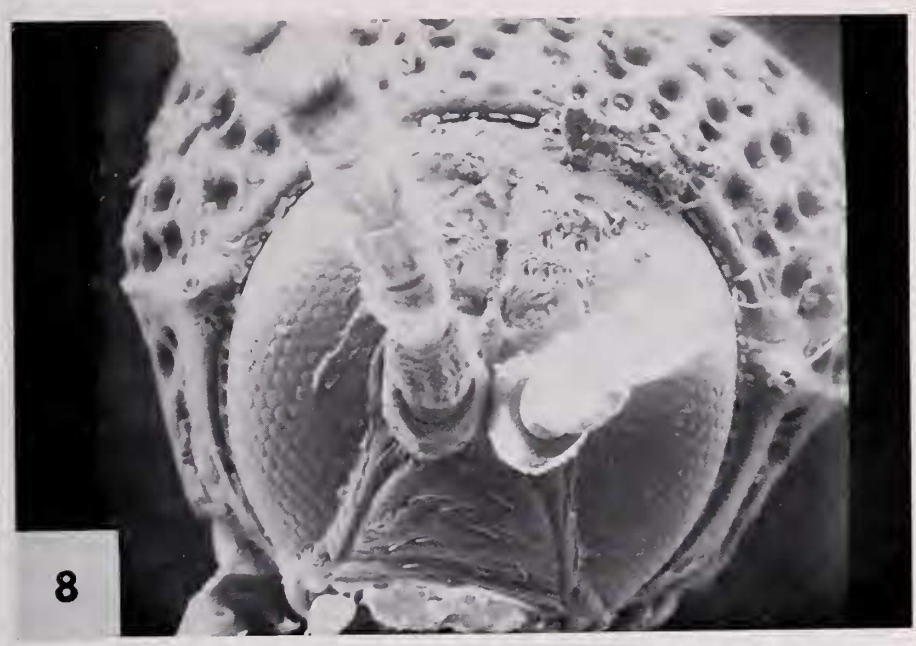
6. **Sumitrosis inaequalis** (Weber), new combination.

(Figs. 5, a, b, c; 7; and 8)

Hispa inaequalis Weber, 1801: 65. (Location of type: unknown to me.)

TYPE LOCALITY. 'North America'

Hispa suturalis Fabricius, 1801: 63; Olivier, 1808: 777; Crotch, 1873: 81, (Synonymized); Chapuis, 1875: 317. (Location of type: probably in the British Museum of Natural History, London; or Hope Museum of Oxford, England; or in the Zoologisch Museum of Kopenhagen, Denmark).



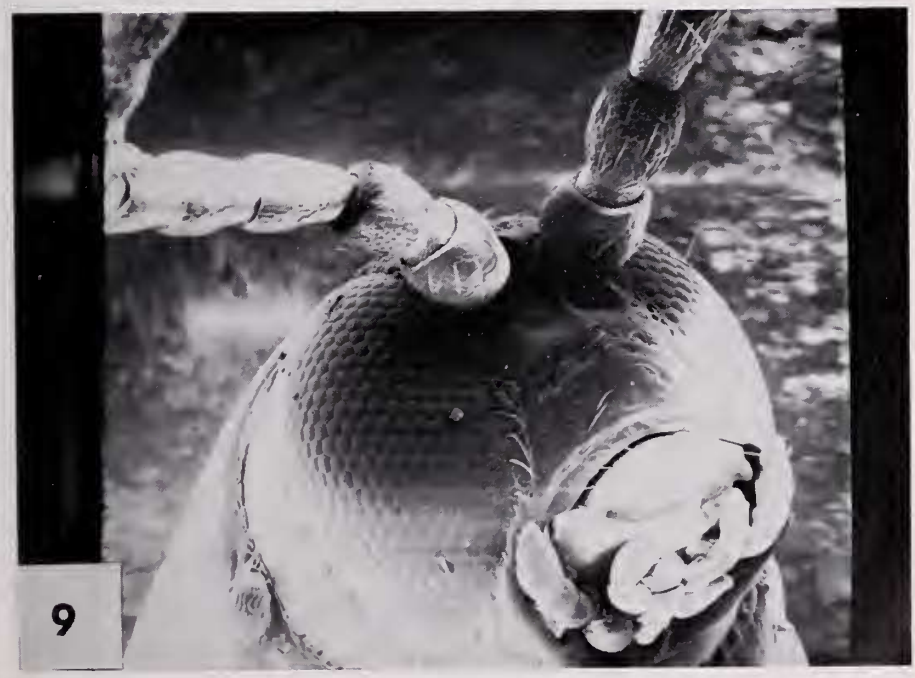


FIG. 8. Clypeus of *S. inaequalis*. × 100.

FIG. 9. Clypeus of *S.* **arnetti**, n. sp. × 100.

TYPE LOCALITY. 'Carolina,' U. S. A.

Hispa obsoleta Say, 1823: 432; Crotch, 1873: 81, (Synonymized); Leconte, 1891: 205. (Location of type: unknown to me.)

TYPE LOCALITY. 'United States of America.'

Hispa pallida Say, 1823: 432; Crotch, 1873: 81, (Synonymized); Leconte, 1891: 205. (Location of type: unknown to me.)

TYPE LOCALITY. U. S. A.

Hispa flavipes Germar, 1824: 529; Crotch, 1873: 81, (Synonymized); Leconte, 1875: 206. (Location of type: probably in the Zoologisch Museum at Berlin or in the Deutch. Entom. Institute at Berlin.)

Hispa baucis Newman, 1838: 390; 1841: 77; Crotch, 1873: 81, (Synonymized). (Location of type: Either in the British Museum (N. H.) or in the Hope Museum of Oxford, England.)

TYPE LOCALITY. Trenton Falls?

Odontota inaequalis (Weber), Crotch, 1873: 81.

Odontota nervosa Horn (not Panzer), 1883: 295, 297, Uhmann, 1964: 415, (Synonymized). (Location of type: Academy of Natural Sciences of Philadelphia).

TYPE LOCALITY. "Eastern U. S. and Arizona."

Chalepus inaequalis (Weber), Baly, 1885: 58.

Anoplitis inaequalis (Weber), Weise, 1911(a): 22; 1911(b): 34; Leng, 1920: 303; Weise, 1921: 275; Blatchley, 1924: 43; Needham, Frost and Tothill, 1928: 199; Uhmann, 1935: 234; Maulik, 1937: 136; Uhmann, 1957: 78; 1964: 415.

DIAGNOSTIC FEATURES. This species resembles *S.* **arnetti**, n. sp. in habitus, but it may be readily separated from the latter by the presence of following characteristics:

Clypeus moderately convex, and strongly transversely elevated at base, surface opaque, micro-granulose with transverse carina at the base.

DESCRIPTION OF SPECIES. MALE. CANADA. Quebec, Duparquet, 9-VII-1941, G. Stace Smith, (CAS).

Total length 4.2 mm.; width 1.8 mm.

HEAD length/width ratio, 0.55. Vertex with a median sulcus and a small indentation of either side near eyes. Antennae 1.4 mm. in length; segments 2–6 robust and feebly sulcate; 2nd segment about 0.5 times longer than 1st; 3rd about .25 times longer than 2nd and its length/width ratio, 1.25. Clypeus moderately convex, surface opaque and micro-granulose. Mandibles monodentate, cutting edges broad and sharp. Eye width subequal to interocular distance and clypeus.

PRONOTUM length 0.8 mm.; width 1.0 mm.; widest at center; dorsum transversely convex, feebly depressed posteriorly; surface orbiculo-foveorate, interstices subcristate; medial line indistintly visible.

elytra length 3.1 mm.; elongatequadrate, slightly arcuately broader apically; lateral and apical margins feebly serrulate.

color. Head testaceous—Antennae black. Lateral margins of pronotum with a narrow, irregular black vitta; an obscure black line on either side of the medial line. Elytral suture, costae and lateral margins marked with black and white as follows: three piceous longitudinal marks on elytral suture, alternating from basal black; similar alternating white and black marking on 1st and 2nd costae are so disposed that the black of the 1st costa is mostly opposite to white of the sutural line on 2nd costa. A large longitudinal marking on the lateral margin and one at the outer apical angle, involving the 3rd costa. A piceous spot on humeri. Venter piceous. Legs testaceous.

male genitalia. Antero-dorsal wall of foramen feebly convex and running into a depression at about one-fourth from base (Fig. 5a). Median lobe tapering distally to subacute point (Fig. 5b). Apical hood truncate towards apex. Tegmen V-shaped. Strut elongate and keeled. Spiculum U-shaped (Fig. 5c).

female. Indistinguishable from male except by dissection.

biology. On May 27, 1968, I have collected nearly 25 specimens of this species on *Solidago graminifolia* (L.) and *Solidago canadensis* (L.), near Glen Head, Nassau Co., New York. Most of the specimens were copulating. Needham, Frost and Tothill (1928), and Maulik (1937) has reported the following foodplants for this species: White Oak (Fagaceae); White snake root, *Eupatorium urticifolium* Banks (Compositae); Wild sensitive plant, *Casssia nictitans* Linn. (Leguminosae).

larvae. Unknown.

variation. The size variations are as follows: total length 3.4–4.2 mm.; elytral length 2.6–3.1 mm.; elytral width 1.4–1.8 mm.

This species is extremely variable in color. The head from piceous to testaceous. Pronotum often pale, usually more or less maculate with piceous. The elytra sometimes pale yellow with slight traces of black markings resembling in this respect with *S.* **arnetti**, n. sp. and *S. rosea* (Weber), or the surface may be black with a few indistinct yellow spots. The great number of variations have given this species a large synonymy.

distribution. The distribution of *S. inaequalis* (Weber) is indicated in Fig. 7. This species is known in the east from southern Canada to Florida and in the west from Alberta to California. It has been collected from late May to early November, mostly in June and July.

specimens examined. 334: *CANADA*: QUEBEC, Duparquet, July 24, 1941, G. Stace Smith, 26, (CAS); Aylmer, June 19, 1936, G. Stace Smith, 1, (CAS). ONTARIO, Sudbury, 1892, R. M. White, 2, (CNC); Ottawa, June 5, 1928, W. J. Brown, 3, (CNC); Leamington, June 14, 1940, W. J. Brown, 14 (CNC). ALBERTA, Edmonton, August 24, 1922, F. S. Carr, 1, (CAS). *UNITED STATES*: NEW HAMPSHIRE, Grafton Co., Franconia, Mrs. A. T. Slosson, 2, (AMNH). Mt. Plst., July 1, (CAS). MASSACHUSETTS, Middlesex Co., Concord, June, A. Fenyes, 1, (CAS). Norfolk Co., Framingham, August 4, 1907, C. A. Frost, 3, (CAS). Mt. Toby, July 6, 1918, 5, (CAS). CONNECTICUT, New Haven Co., New Haven, Van Duzee, 7, (CAS). Middlesex Co., Cormwell, June 10, 1920, K. F. Chamberlain, 7,

(CAS). Fairfield Co., New Canaan, June 12, 1954, M. Statham, 1, (CAS). Tolland Co., Storrs, June 5, 1955, P. D. Ashlock, 3, (UCB). NEW YORK, Eric Co., Colden, June 7, 1908, M. C. VanDuzee, 1, (CAS); Buffalo, May 24, 1908, M. C. VanDuzee, 3, (CAS); Angola, June 6, 1891, M. C. VanDuzee, 1, (CAS); Lancaster, June 28, 1908, M. C. VanDuzee, 1, (CAS). Putnam Co., Cold Spring Harbor, May 10, 1931, C. H. Curran, 2, (AMNH). Bronx Co., New Rochelle, May 12, 1945, L. Lacey, 8, (AMNH). Nassau Co., Glen Head, May 27, 1968, J. G. Butte, on *Solidago* spp., 25, (JGB). Richmond Co., Staten Island, Blaisdell, 4, (CAS). Co. undet., Concord, M. C. VanDuzee, 2, (CAS); DeBruce, August 23–26, 1942, 1, (AMNH); Pelham, June 2, 1930, L. Lacey, 6, (AMNH); North Bch., June 3, 1927, F. M. Schott, 1, (AMNH); Bear Mt., Oct. 5, 1947, J. G. Rozen, 2, (UCB). No further data, Van Dyke, 2, (CAS). NEW JERSEY, Warren Co., Phillipsburg, August 2, 1914, 5, (CAS). Bergen Co., Alpine, July 28, 1946, P. Vaurie, 3, (AMNH). Englewood, June 4, 1948, J. G. Rozen, 1, (UCB). Closter, July 2, 1948, J. G. Rozen, 1, (UCB). Morris Co., Chester, July, 1916, 1, (AMNH). Lahaway, May 30, 1916, Chris. E. Olsen, 2, (AMNH); Snake Hill, 1, (AMNH). PENNSYLVANIA, Northampton Co., Easton, June 20, 1915, J. W. Green, 7, (CAS); Wind Gap, June 8, 1934, J W. Green, 1, (CAS). Snyder Co., Hummelstown, J. N. Knull, 1, (CAS). Clearfield Co., Philipsburg, May 15, 1921, L. S. Slevin, 2, (CAS). Pike Co., Milford, May 30, 1941, B. Malkin, 1, (CNHM). Aspin, July 21, H. L. Chermock, 5, (CAS); Belfast, July 30, 1937, J. W. Green, 5, (CAS); Belfast, June 20, 1952, L. Lacey, 1, (AMNH). No further data, A. Fenyes collection, 2, (CAS). MARYLAND, Baltimore Co., Baltimore, June, 1902, Van Dyke, 4, (CAS). Co., undet., Plummers Island, May 25, 1918, Van Dyke, 12, (CAS); Springfield, July 7, 1903, F. Knab, on *Solidago*, 3, (USNM). VIRGINIA, No further data, Van Dyke, 2, (CAS). WEST VIRGINIA, Harrison Co., Fairmont, June 6–22, 1927, P. N. Musgrave, 3, (CAS). NORTH CAROLINA, Buncombe Co., Black Mts., July, 1902, Van Dyke, 19, (CAS). Gray Beard Mt., 4, (AMNH); Blue Ridge, July 20, 1951, Bryant, 1, (CAS); Linnville, July 16, 1951, Bryant, 1, (CAS). FLORIDA, No further data, Mrs. A. T. Slosson, 1, (AMNH). TENNESSEE, No further data, A. Fenyes collection, 1, (CAS). OHIO, Vinton Co., Lake Alma, W. C. Stehr, 2, (CAS). Cuyahoge Co., Bedford, May 19, 1945, J. C. Pallister, 1, (AMNH); Cleveland, May 19, 1945, J. C. Pallister, 2, (AMNH). MICHIGAN, Ingham Co., Williamston, July 16, 1944, B. Malkin, 1, (CNHM). Ag. coll. June 4, 1924, L. S. Slevin collection, 5, (CAS). INDIANA, Lake Co., May 29, 1903, W. W. B. 1, (PUL). Dubois Co., May 12, 1908, W. S. B., 1, (PUL). Spiner Co., May 24, 1908, W. S. B. 1, (PUL). Tippecanoe Co., Nov. 6, 1935, 4, (PUL). Morgan Co., May 29, 1932, Musgrave, 1, (PUL). Lawrence Co., August 24, 1932, L. I. Musgrave, 1, (PUL). Poscy Co., April 26, 1908, W. S. B., 1, (PUL). Marion Co., September 5, 1927, W. S. B., 2, (PUL). Kosciusko Co., June 25, 1904, W. S. B., 1, (PUL); May 21, 1933, Geo. E. Gould, 6, (PUL). ILLINOIS, St. Clair Co., Cahokia, G. W. Bock, 3, (CAS). Randolph Co., Evansville, June 12, 1913, Van Dyke, 1, (CAS). Co. undet., Edgebrock, June 3, 1921, L. S. Slevin, 1, (CAS). MISSOURI, St. Louis Co., St. Louis, May 29, 1898, G. W. Bock, 3, (CAS). Co. undet., Roaring River St. Park, June 15, 1954, G. W. Green, 1, (CAS). IOWA, Johnson Co., Iowa City, Wickham, 2, (CAS). NEBRASKA, Lancaster Co., Lincoln, May 30, 1909, F. H. Shoemaker, 1, (CAS). Douglas Co., Omaha, Mr. Childs Point, F. H. Shoemaker, 1, (CAS). KANSAS, Pottawatomie Co., Onaga, May 26, 1923, Crevecoeur, 5, (CAS); Van Dyke, 1, (CAS). TEXAS, Bexar Co., San Antonio, May, A. Penyes, 1, (CAS); July, 1942, E. S. Ross, 1, (CAS). Uvalde Co., Uvalde, June 14, 1932, J. O. Martin, 1, (CAS). Macdona, July, 1928, J. W. Green, 1, (CAS). ARIZONA, Pima Co., Sta. Rita Mts., June 16, 1933, Bryant, 1, (CAS). COLORADO, Co. undet., Peaceful Valley, 2, (AMNH); Twin Sisters, 1, (AMNH). No further data, 1, (AMNH). UTAH, Cache Co., Logan Cyn., June 18, 1960, G. F. Knowlton, 1, (UNC) Salt Lake Co., Salt Lake City, July 15, 1925, Van Dyke, 13, (CAS). CALIFORNIA, Placer Co., Dutch Flat, Nov. 6, 1908, G. R. Pilate, 1, (CAS).

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